06-28-05 PTO/SB/21 (09-04) 7 (19-04) 16. OMB 0651-000 Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE JUN 2 7 2005 der the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number Application Number 10/615,810 TRANSMITTAL Filing Date July 8, 2003 **FORM** First Named Inventor John Dankwardt Art Unit 1755 **Examiner Name** Brown, Jennine M. (to be used for all correspondence after initial filing) Total Number of Pages in This Submission Attorney Docket Number 021153-001900 US ENCLOSURES (check all that apply) Drawing(s) | | Fee Transmittal Form After Allowance Communication to TC Appeal Communication to Board Fee Attached Licensing-related Papers of Appeals and Interferences Petition Appeal Communication to TC Amendment / Reply (Appeal Notice, Brief, Reply Brief) Petition to Convert to a After Final Proprietary Information Provisional Application Power of Attorney, Revocation Affidavits/declaration(s) Change of Correspondence Address Status Letter Terminal Disclaimer Other Enclosure(s) Extension of Time Request (please identify below): **Express Mail Certificate** Request for Refund Express Abandonment Request Fee Transmittal Form; CD, Number of CD(s) **IDS Statement:** Information Disclosure Statement PTO/SB/08a; and Landscape Table on CD Return Postcard Certified Copy of Priority Remarks Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Signature

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Semil B. Rollins

Printed Name

Samuel B. Rollins

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant

JUN 2 7 2005

John Dankwardt et al.

Ser. No.

10/615,810

Filing Date

July 8, 2003

For

Nickel Catalyzed Cross-Coupling Reactions Between

Organomagnesium Compounds and Anisole Derivatives

Examiner

Brown, Jennine M.

Art Unit

1755

Atty. Docket:

021153-001900 US

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P.O. Box 1450

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INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08a. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

I. <u>COPIES</u>

- 1. This application was filed <u>before</u> June 30, 2003. Accordingly, submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- Z. This application was filed on or after June 30, 2003. Accordingly, copies of cited U.S. patents and patent applications are not included. Copies of foreign patent documents and non-patent literature are included.

II. CONCISE EXPLANATION OF RELEVANCE

- DOCUMENTS IN THE ENGLISH LANGUAGE

 The patents, publications, or other information listed on the attached PTO/SB/08a are in the English language and do not require a statement of relevancy.

			 a. CONCISE EXPLANATION A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:
			b. ENGLISH LANGUAGE SEARCH REPORT An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. MPEP 609(III)(A)(3).
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Respectfully submitted,

Date: <u>Jane 24, 20</u>05

Samuel B. Rollins Registration No. 52,180

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	Complete if Known	
Application Number	10/615,810	
Filing Date	July 8, 2003	
First Named Inventor	John Dankwardt	
Art Unit	1755	
Examiner Name	Brown, Jennine M.	
Attorney Docket Number	021153-001900 US	

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			U.S. PATENT	OCUMENTS	
Examiner Initials *	Cite No.1	Document Number Number - Kind Code ² (if	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
		known)			Figures Appear
	PC-001	US- 4,263,466	04/21/1981	Colon et al.	
	PC-002	US- 4,412,856	11/01/1983	Brunner et al.	
	PC-003	US- 4,508,560	04/02/1985	Brunner et al.	
	PC-004	US- 4,620,025	10/28/1996	Sletzinger et al.	
	PC-005	US- 4,724,260	02/09/1988	Kirchhoff et al.	
	PC-006	US- 4,730,032	03/08/1988	Rossi et al.	-
	PC-007	US- 4,912,276	03/27/1990	Puckette	
	PC-008	US- 4,916,227	04/10/1990	Puckette	
	PC-009	US- 4,990,647	02/05/1991	Himmler et al.	
	PC-010	US- 5,084,204	01/28/1992	Reiffenrath et al.	
	PC-011	US- 5,128,355	07/07/1992	Carini et al.	
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	PC-013	US- 5,202,349	04/13/1993	Zimmer et al.	
	PC-014	US- 5,237,116	08/17/1993	Corley et al.	
	PC-015	US- 5,264,456	11/23/1993	Chandrratna et al.	
	PC-016	US- 5,288,895	02/22/1994	Bouisett et al.	
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	PC-026	US 2003-0100760	05/29/2003	Miller	
	PC-090	US 2005-0137402	06/23/2005	Miller et al.	

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Examiner		Foreign Patent Document		Name of Patentee or	Pages, Columns, Lines,	
Initials*	Cite No.1	Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	Т ⁶
	PC-027	EP 0 131 968	01/23/1985	Araya et al.		
	PC-028	EP 0 470 795	02/12/1992	Roberts et al.		
	PC-029	EP 0 470 794	02/12/1992	Roberts et al.		

Examiner Signature	Date Considered	

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	Complete if Known	
Application Number	10/615,810	
Filing Date	July 8, 2003	
First Named Inventor	John Dankwardt	
Art Unit	1755	
Examiner Name	Brown, Jennine M.	
Attorney Docket Number	021153-001900 US	

		NON PATENT LITERATURE DOCUMENTS	
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	PC-031	ALI et al., "Palladium-Catalysed Cross-Coupling Reactions of Arylboronic Acids with .PIDeficient Heteroaryl Chlorides", Tetrahedron, vol. 48, pp. 8117-8126, (1992)	
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	PC-034	BRINGMANN et al., "The Directed Synthesis of Biaryl Compounds: Modern Concepts and Strategies", Angew. Chem, Int. Ed. Engl., vol. 29, 977-991, (1990)	
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	PC-040	FUSON, R.C. and W.S. FRIEDLANDER, "Displacement of substituents in phenyl 2,4,6,-triisoplylphenyl ketone by the action of Grignard reagents", J. Am. Chem. Soc., vol. 75, pp. 5410-5411, (1953)	
	PC-041	FUSON, R.C. et al., "The reaction of Grignard reagents with the cyanobenzoyldurenes;", J. Org. Chem., vol. 16, pp. 648-654, (1951)	
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	PC-043	HOUSE et al., "Reactions of the 1,8-Dipenylanthracene System", J. Org. Chem., vol. 45, pp. 1807-1817 (1980).	
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	PC-046	KALININ et al., "Carbon-Carbon Bond Formation in Heterocycles Using Ni- and Pd-Catalyzed Reactions", Synthesis, pp. 413-432, (1992)	
	PC-047	MANTLO et al., "Potent, Orally Active Imidazo 4,5-b pyridine-Based Angiotensin II Receptor Antagonists", J. Med. Chem., vol. 34, pp. 2919-2922 (1991)	
	PC-048	MILLER AND FARRELL, "Preparation of unsymmetrical Biaryls via Ni- or Pd-catalyzed coupling of aryl chlorides with aryizincs", Tett.Lett., vol. 39, pp. 6441-6444, (1998)	
· · · · · · · · · · · · · · · · · · ·	PC-049	MILLER AND FARRELL, "Synthesis of functionally substitutedunsymmetriczal Biaryls via a novel double metal catalyzed coupling reaction", Tetrahedron Letters, vol. 39, pp.7275-7278 (1998)	

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Complete if Known Application Number 10/615,810 Filing Date July 8, 2003 First Named Inventor John Dankwardt Art Unit 1755 Examiner Name Brown, Jennine M.

(Use as many sheets as necessary)

Sheet Attorney Docket Number 021153-001900 US

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	PC-050	MILLER et al., "Nickel Catalyzed Cross-Coupling and Animation Reactions of Aryl Nitriles", Synthesis, No. 11, pp. 1643-1648, (2003)	
	PC-051	MILLER et al., "Nickel catalyzed cross-coupling of modified alkyl and alkenyl Grignard reagents with aryl- and Heteroaryl nitriles: activation of the C-CN bond", Tetrahedron Letters, vol. 44, pp. 1907-1910, (2003)	
	PC-052	MILLER, "C-C Bond Activation with selective functionalization: preparation of unsymmetrical Biaryls for benzonitriles", Tetrahedron Letters, vol. 42, pp. 6991-6993, (2001)	
	PC-053	MILNER, D.J. et al., "The mono-alkyldecyanation of tetrafluoroterephtalonitrile by reaction with Gringard reagents," J. Organometallic Chem., vol. 302, pp. 147-152, (1986)	
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	PC-055	NAKAO, et al., "Nickel-Catalyzed Arylcyanation of Alkynes", Journal American Chemical Society, (2004)	
- 1- 1	PC-056	NEGISHI et al., "Selective Carbon-Carbon Bond Formation via Transition Metal Catalysis. 3. A Highly Selective Synthesis of Unsymmetrical Biaryls and Diarylmethanes by the Nickel- or Palladium-Catalyzed Reaction of Aryl- and Benzylzine Derivatives with Aryl Halides", J. Org. Chem., vol. 42, pp. 1821-1823 (1977)	
	PC-057	PENNEY et al., "Alkynylation of benxonitriles via nickel catalyzed C-C bond activation", vol. 45, pp. 4989-4992, (2004)	
	PC-058	PERCEC et al., "Aryl Mesylates in Metal Catalyzed Homo- and Cross-Coupling Reactions. 4. Scope and Limitations of Aryl Mesylates in Nickel Catalyzed Cross-Coupling Reactions", J. Org. Chem., vol. 60, 6895-6903, (1995)	
	PC-60	ROSSI et al., "Palladium-Catalyzed Syntheses of Naturally-Occurring acetylenic Thiophens and Related Compounds", Tetrahedron, vol. 40, pp. 2773-2779, (1984)	
	PC-061	SAITO et al., "A Synthesis of Biaryls via Nickel (O)-Catalyzed Cross-Coupling Reaction of Chloroarenes with Phenylboronic Acids", Tetrahedron Letters, vol. 37, pp. 2993-2996, (1996)	
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Complete if Known Application Number 10/615,810 Filing Date July 8, 2003 First Named Inventor John Dankwardt Art Unit 1755 Examiner Name Brown, Jennine M. 021153-001900 US

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	,	NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	т:
	PC-063	SILBILLE et al., "Electrochemical Conversion of Functionalised Aryl Chlorides and Bromides to Arylzinc Species", J. Chem. Soc. Chem. Comm., pp. 283-284 (1992)	
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	PC-065	STANFORTH, S.P., "Catalytic cross-coupling reactions in Biaryl synthesis," Tetrahedron, vol. 54, pp. 263-303 (1998)	
	PC-066	TAMAO et al., "Nickel-Phosphine Complex-Catalyzed Grignard Coupling. I. Cross-Coupling of Alkyl, Aryl, and Alkenyl Grignard Reagents with Aryl and Alkenyl Halides: General Scope and Limitations", Bull. Chem. Soc. Japan, vol. 49, pp. 1958-1969, (1976)	
	PC-067	VOEGTLE et al., "Tweezer-shaped hydrocarbons", Chemical Abstracts, vol. 125, pp. 219-235 (1992)	
	PC-068	WENKERT, et al., "Transformation of Carbon-Oxygen into Carbon-Carbon Bonds Mediated by Low-Valent Nickel Species", Journal of Organic Chemistry, vol. 49, pp. 4894-4899, (1984)	
	PC-069	WENKERT, et al., "Nickel-Induced Conversion of Carbon-Oxygen into Carbon-Carbon Bonds, One-Step Transformations of Enol Ethers into Olefins and Aryl Ethers into Biaryls", vol. 101, pp. 2246-2247, (1979)	
	PC-070	WHITALL ET AL, "Organometallic Complexes for Nonlinear Optics. 3.1 Molecular Quadratic Hyperpolarizabilities of Ene-, Imine-, and Azo-Linked Buthenium, sigma, -Acetylides: Z-ray Crystal Structure of Ru (E) -4, 4' –C. tplbond.CC6H4CH: CHC6H4NO2: (PPh3) 2 (.eta. –C5H5)", Organometallics, 15(7), pp. 1935-41, (1996)	
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